

Appl. No.: 09/841,713
Amdt. Dated: July 25, 2005
Off. Act. Dated: March 25, 2005

REMARKS

Reconsideration of this application is respectfully requested in view of the foregoing amendments and discussion presented herein.

1. **Objection to Drawings.**

The objections to the drawings have been noted, and a set of substitute formal drawings are enclosed. Since only the formality of the drawings was objected to there were no proposed corrections to be shown in red.

2. **Specification Amendment.**

The specification has been amended to correct a typographical error detected when preparing this response, the Applicant apologizes for any inconvenience that may have resulted.

3. **Allowability of Claims 2, 7, 9, 12, 14, 16, 18 and 19.**

The Applicant notes with appreciation the Examiner's determination that Claims 2, 7, 9, 12, 14, 16, 18 and 19 would be allowable if rewritten in independent form to include all the limitations of the base claim and any intervening claims.

In response, the Applicant has incorporated the limitations of Claim 2 into Claim 1 (the independent base claim) and cancelled Claim 2. Therefore, amended Claim 1, as well as Claims 3-6 which depend therefrom, are now in a condition for allowance.

The applicant has also added material from Claim 16 into independent Claim 8, and cancelled Claim 16. Therefore, amended Claim 8, as well as Claims 9-15 and 17-19 which depend therefrom, are now in a condition for allowance.

Additionally, Applicant presents new Claims 21-25 based on these original claims. Independent Claim 21 includes the material of Claim 8 while incorporating material from Claims 16 / 17+19 / 18+19, which were held to be allowable.

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AMENDMENTS TO THE DRAWINGS:

The attached sheets of drawings comprise replacement drawings sheets in which the objected to FIG. 1 has been redrawn. The replacement sheets are more formal than those currently in the application.

Attachment: Replacement Sheets

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Additionally, it appears that upon overcoming the 112 rejection that Claims 11 and 15 would also be allowable, as no novelty or obviousness rejections are outstanding on these claims.

4. Rejection of Claims 4-6, 11, 15 and 20 under 35 U.S.C. §112.

Claims 4-6, 11 and 15. Applicant has removed the term "such as" and utilized more appropriate phrasing.

Claim 20. Applicant has corrected the antecedent basis replacing "microphones" with "microphone".

5. Rejection of Claims 1 under 35 U.S.C. §102(e).

Claim 1 has been rejected under 35 U.S.C. §102(e) based on the patent of Steelman (U.S. Pat. No. 6,101,256).

In order to expedite allowance of the claims, Claim 2 which has been held to be allowable has been incorporated into Claim 1, (and Claim 2 canceled). In making this election Applicant neither agrees or disagrees with the rejection, however, Applicant reserves the right to pursue the original scope of these claims at a future time.

6. Rejection of Claim 4 under 35 U.S.C. §103(a).

Claim 4 was rejected under 35 U.S.C. § 103(a), as being unpatentable over Steelman (U.S. Pat. No. 6,101,256) in view of Kong et al. (U.S. Patent No. 6,782,106).

Claim 4. Dependent claim 4 depends from Claim 1 which has been amended to include previously dependent Claim 2 which was considered allowable. Claim 4 therefore should be considered *a fortiori* allowable.

7. Rejection of Claims 8, 10, 13, 17 and 20 under 35 U.S.C. §103(a).

Claims 8, 17 and 20 were rejected under 35 U.S.C. § 103(a), as being unpatentable over Steelman (U.S. Pat. No. 6,101,256) in view of Inanaga et al. (U.S.

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Patent No. 5,276,740).

Claim 8. Independent Claim 8 was amended to include material of Claim 16, wherein amended Claim 8 should be thus allowable.

Claim 20. Independent Claim 20 was cancelled.

Claims 10, 13 and 17. Dependent Claims 10, 13 and 17 depend from Claim 8 which has been amended to include previously dependent claim material of Claim 16 which was considered allowable. Claims 10, 13 and 17 therefore should be considered *a fortiori* allowable.

8. Amendment of Specification.

The Applicant has amended the specification to correct a typographical error wherein the letter "a" was deleted within the phrase "preferably registered by [[a]] microphones", which was discovered while preparing this response.

9. Amendment of Claims 1, 2, 4, 8, 10-13, 15-16 and 20.

Claim 1. Independent Claim 1 has been amended by the inclusion of the material of dependent Claim 2, which was deemed allowable if rewritten in independent form. .

Claims 2 and 16. Dependent Claims 2 and 16 were cancelled.

Claims 4, 11 and 15. Dependent Claims 4, 11 and 15 were amended to correct improper wording with the phrase "such as".

Claim 8. Independent Claim 8 was amended to include the material of dependent Claim 16, which was deemed allowable if rewritten in independent form.

Claim 10. Dependent Claim 10 was amended to correct the beginning of the preamble to match the base claim. It was changed from "A headset" to "An apparatus".

Claims 12 and 13. Dependent Claims 12 and 13 were amended to change the phrasing that spoke about "sound characterizations". Claim 12 amendment directs the claim to the patterns of sound described as "external sounds" which can be recorded as

“programmed sounds”. Claim 13 amendment directs the claim to how the user selects which programmed sounds from a collection of preprogrammed sounds are to be used for comparing the external sounds registered by the microphone. These amendments simplify understanding and are more clearly directed at the purposes of the device.

Claim 20. Independent claim was cancelled to allow for introduction of new Claim 21 based on Claim 8, without incurring the cost for an additional independent claim.

10. Addition of Claims 21-25.

Claim 21. Independent Claim 21 is based on Claim 8 and includes material from dependent claims deemed allowable if rewritten in independent form. The phrasing in some portions of Claim 21 has been simplified to improve clarity.

The stored sounds are described as being “*a set of preprogrammed and/or user programmed sounds stored within memory*” as described in original claims 12 and 13, and throughout the specification, including page 8, line 17 through page 9, line 7:

“The sounds to be correlated may be loaded into the apparatus as elements within a set of programmed sound selection criterion by way utilizing the apparatus to record sounds, or characteristics sounds, which are to be correlated. Many of the sounds for which the user desires reduced acoustic isolation from the environment will be unique to their particular environment, for example their spoken name, the sound of the doorbell, and so forth. Alternatively, preprogrammed sounds may be selected for the selection criterion, loaded from a storage media such as a CD-ROM, or downloaded into the unit, either directly, as a sound, as a set of sound characterizations, as a program entity (algorithm), or as a combination thereof. For example, a single complex selection criterion of “siren” may comprise an algorithm that is capable of discerning a wide variety of common sirens in use. Utilizing this as a preprogrammed algorithm, or a downloaded algorithm would provide a broad discernment of sirens without the need to record one or more specific siren sounds.”

The response of the apparatus to matching the sounds is described as “*generating an alerting audio signal to the wearer, or for modulating the level of*

acoustic isolation provided by the apparatus, or both", which is described in the specification such as at page 8, lines 10-13: *"The signal processing unit compares the microphone signals against a set of stored selection criterion and upon finding a match alters the amount of acoustical isolation provided by the headset, and/or provides an alerting audio signal to the wearer."* The above portion of the claim was also found in original Claim 16, now incorporated into Claim 8.

Claim 22. Dependent Claim 22 is progeny of Claim 21, and is based on original Claim 19 describing blocking of sounds in response to matching, and hopefully provides improved readability.

Claim 23. Dependent Claim 23 is progeny of Claim 21, and is based on original Claim 18 describing reducing acoustic isolation in response to matching, and hopefully provides improved readability.

Claim 24. Dependent Claim 24 is progeny of Claim 21, and is based on original Claims 4, 5 and 15, describing attenuating incoming signals (if the device is a headset for playing music or communication) and is described within the specification, including page 5, lines 14-16: *"Automatic changes in acoustic isolation may be similarly coupled with attenuation of the incoming audio signals, as well as the generation of alerts, matching sound "echos", and so forth to further enhance user cognition of the external environment."*

Claim 25. Dependent Claim 25 is progeny of Claim 21, and is based on original Claim 16 and describes aspects of said alerting audio signal as described within the specification, including page 6, line 15 through page 7, line 2:

"The mode change of the apparatus generally comprises altering the level of acoustical isolation accorded the wearer by the headset. The mode of the headset may be changed by any of a number of mechanisms, for example, by temporarily routing external sound to earpieces (a "hearthrough mode"), replaying the detected sound (temporally displaced sound - an "echo back"), generating an alert signal ("user alert tone"), attenuating the sound by augmenting active noise cancelation with selective sound acoustical isolation ("block matched sound"), amplifying the ambient sounds after extracting spurious noises, accentuating spoken sounds (drop noise floor while amplifying speech

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highlights and formants), combinations of the preceding modes, and so forth."

as well as page 12, lines 3-8:

"The sound can be augmented, preferably depending on the duration, and nature of the sound being recognized, by playing back a recorded version of the precise received segment of received sound (an "echo") which was correlated with the stored selection criterion. A number of alternatives may be similarly produced, such as playing the recorded sound associated with the stored selection criterion, or the playing of audio alert signals by themselves or in combination with the aforementioned sounds."

and also page 21, lines 5-11:

"In addition, as it will be appreciated that the spoken word "hello" was blocked during correlation, the sound "hello" received from the environment and just correlated may be played, in essence as an echo upon which an additional alert tone may be superimposed to alert the wearer that a hearthrough correlation has occurred and to indicate that the replayed sound has been reproduced (thereby suffering from a temporal shift) so that the user will not be confused if the echo of "hello" is heard in concert with continued verbiage from the person who uttered the "hello".

All the above additional claims recite elements which have already been addressed in the original claims, wherein the Examiner should not be subject to undue burden in entering these additional claims.

11. Additional Claim fees.

The application as originally filed included twenty (20) total claims and three (3) independent claims. The Applicant has cancelled three total claims (Claims 2, 16 and 20) including one (1) independent claim (Claim 20). The Applicant has added a total of five (5) claims (Claims 21-25) including one (1) independent claim.

An appropriate fee is enclosed for two (2) additional total claims and no additional independent claims.

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12. Extension of Time Petition.

The Applicant has enclosed a petition for a one-month extension of time to respond to the Office Action and has enclosed the appropriate petition fee.

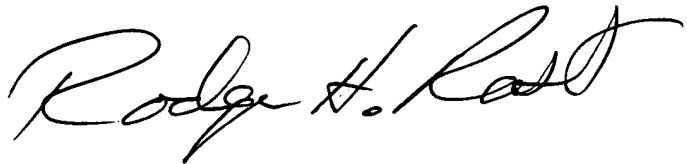
13. Conclusion.

Each of these presently pending claims in this application is believed to be in immediate condition for allowance.

The Applicant respectfully requests a response/interview (email/phone) with the Examiner to clarify any issues that still exist with the allowability of these claims.

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Respectfully submitted,



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